

CLAIMS

1. A sample arraying/assembling device comprising: a distributing section which is capable of holding respective solutions containing samples to be distributed, and which has a plurality of holding ends arranged in a predetermined matrix; and a wound body
5 which has a plane surface wound with a string-like or thread-like slender foundation member on which samples are to be distributed at distribution intervals of column or line of the matrix, which is arranged in parallel at winding intervals of the line or column of the matrix on the plane surface, so that the respective holding ends can come into contact therewith.
- 10 2. A sample arraying/assembling device according to claim 1, comprising a container which has a plurality of wells capable of storing the respective solutions containing said samples to be distributed, arrayed in said predetermined matrix, and said respective holding ends of said distributing section are provided so as to be able to be inserted into said respective wells.
- 15 3. A sample arraying/assembling device according to claim 1, wherein said distributing section has liquid storing sections capable of storing the respective solutions containing the samples to be distributed, arrayed in said predetermined matrix, and said holding ends are respectively communicated with said liquid storing sections.
4. A sample arraying/assembling device according to any one of claim 1 through
20 claim 3, wherein said wound body has a plate body and said plane surface is a plate face.
5. A sample arraying/assembling device according to any one of claim 1 through claim 4, wherein said wound body has a prism and said plane surface is a side face.
6. A sample arraying/assembling device according to any one of claim 1 through claim 5, wherein said distributing section has a plurality of holding ends projecting to the
25 bottom side of a rectangular board, and arranged in said predetermined matrix.
7. A sample arraying/assembling device according to any one of claim 1 through claim 5, wherein said holding ends have a material with a water bearing property.
8. A sample arraying/assembling device according to any one of claim 1 through claim 7, wherein the surface of said wound body is provided with a localization section
30 which localizes the samples within a fixed range on said foundation member, in distribution positions of the respective samples provided at distribution intervals of the column or line along a winding route of said foundation member which has been provided in parallel at said winding intervals of the line or column of the predetermined matrix.

9. A sample arraying/assembling device according to claim 8, wherein said localization sections are concavities at said distribution intervals of the column or line, along the winding route of said foundation member that has been provided in parallel at the winding intervals of the line or column of the predetermined matrix, and said foundation member is in contact with the holding ends in said concavities.

10. A sample arraying/assembling device according to claim 8, wherein said localization sections are convex portions provided at said distribution intervals of the column or line, along the winding route of said foundation member that has been provided in parallel at the winding intervals of the line or column of the predetermined matrix.

11. A sample arraying/assembling device according to any one of claim 1 through claim 10, wherein the surface of said wound body is formed with striations for guiding the foundation member along the winding route of said foundation member.

12. A sample arraying/assembling device according to any one of claim 1 through claim 11, comprising: a base which detachably attaches said container and/or said wound body solely or in laminations in this order; and a movable section which is detachably attached with said distributing section above said base, and which can move the distributing section vertically so that it can be in contact with or separated from said container and/or the wound body.

13. A sample arraying/assembling device, comprising: a detachably provided wound body which is wound with a foundation member on which samples are distributed at distribution intervals of column or line in a predetermined matrix, in parallel at said winding intervals of the line or column; a detachably provided core to which one end of said foundation member is attached, and which is to be wound with said foundation member; and a foundation member rolling section which sequentially takes out said foundation member from said wound body while rolling it up around said core at narrower intervals than said winding intervals; so as to assemble and arrange said foundation member.

14. A sample arraying/assembling device according to claim 13, wherein said foundation member rolling section rotates at least one of said wound body and said core, and relatively revolves said wound body and said core about each other, and relatively translationally moves them, so as to sequentially take out said foundation member from said wound body, and to roll up the foundation member that has been taken out, around said core.

15. A sample arraying/assembling device according to claim 13, comprising a core rotating and moving section which makes said foundation member rolling section rotate the core in the direction of rolling up said foundation member, and revolve around said wound body in the direction of taking out said foundation member, and translationally
5 moves the core relatively with respect to the wound body, to thereby roll up said foundation member around the core.

16. A sample arraying/assembling device according to either one of claim 14 and claim 15, wherein said wound body is swingably held.

17. A sample arraying/assembling device comprising: a distributing section which is
10 capable of holding respective solutions containing samples to be distributed, and which has a plurality of holding ends arranged in a predetermined matrix; a wound body which has a plane surface wound with a string-like or thread-like slender foundation member on which samples are to be distributed at distribution intervals of column or line of the matrix, which is arranged in parallel at the winding intervals of the line or column on the
15 plane surface, so that the respective holding ends can come into contact therewith; a detachably provided core to which one end of said foundation member is attached, and which is to be wound with said foundation member; and a foundation member rolling section which sequentially takes out said foundation member from said wound body while rolling it up around said core at narrower intervals than said winding intervals; so as to
20 assemble and arrange said foundation member.

18. A sample arraying/assembling method of distributing samples at once at distribution intervals of column and line of a predetermined matrix, on a string-like or thread-like slender foundation member, comprising: a holding step for holding respective solutions containing samples to be distributed, on a plurality of holding ends arranged in a
25 predetermined matrix; and a contact step for making said respective holding ends contact with said foundation member wound on a wound body having a plane surface wound so that said foundation member is arranged in parallel at the winding intervals of the line or the column on the plane surface.

19. A sample arraying/assembling method according to claim 18, wherein said holding
30 step is performed by inserting said holding ends into respective wells of a container having a plurality of wells arranged in the predetermined matrix, and storing solutions containing samples to be distributed.

20. A sample arraying/assembling method according to either one of claim 18 and claim 19, wherein said holding step comprises supplying the solution arranged in the predetermined matrix, and containing samples to be distributed, into a plurality of respective holding ends from the inside thereof.

5 21. A sample arraying/assembling method comprising an assembling step for: sequentially taking out a foundation member from a wound body wound with a foundation member on which samples are distributed at distribution intervals of column or line of a predetermined matrix, in parallel at said winding intervals of the line or column; and rolling said foundation member up around a core to which one end of said foundation
10 member is attached, and around which said foundation member is wound, at narrower intervals than said winding intervals.

22. A sample arraying/assembling method according to claim 21, wherein said assembling step comprises rotating at least one of said wound body and said core, and relatively revolving said wound body and said core about each other, and relatively
15 translationally moving them, so as to sequentially take out said foundation member from said wound body, and to roll up said foundation member that has been taken out, around said core.

23. A sample arraying/assembling method, comprising: a holding step for holding respective solutions containing samples to be distributed on a plurality of holding ends
20 arranged in a predetermined matrix; a contact step for making said respective holding ends contact with said foundation member and said wound body having a plane surface wound so that said foundation member is arranged in parallel at said winding intervals of line or column of the matrix on the plane surface; and an assembling step for sequentially taking out said foundation member from said wound body wound with said foundation member
25 on which samples are distributed, in parallel at said winding intervals of the line or column, and rolling up said foundation member around a core to which one end of said foundation member is attached, and around which said foundation member is to be wound, at narrower intervals than said winding intervals.

24. A wound body which has a string-like or thread-like slender foundation member
30 on which samples are to be distributed at distribution intervals of the column or line, and a plane surface wound with said foundation member so as to be arranged in parallel at said winding intervals of the line or column on the plane surface.

25. A sample arraying/assembling device, comprising: an assembled body having a core having a peripheral curved face or two side faces or more on which respective samples are to be distributed in predetermined positions with intervals, or wound or coated with a member on which respective samples are to be distributed in predetermined positions with intervals around the axis; and a rotating section which intermittently rotates said core around said axis for each predetermined angle so that said respective samples can be distributed around said peripheral curved face, said respective side faces, or said wound or coated member.

26. An apparatus using a sample arraying/assembling device comprising: a sample assembly having a core having a peripheral curved face or two side faces or more on which respective samples are distributed in predetermined positions with intervals, or wound or coated with a member on which respective samples are distributed in predetermined positions with intervals around the axis; a translucent or semitranslucent pipette tip capable of storing said sample assembly and having a fluid drawing and discharging opening; a rotating section which intermittently rotates said pipette tip and said sample assembly stored in said pipette tip, around the axis of said pipette tip or the core for each predetermined angle; and an optical information acquisition section which receives light from said sample assembly and obtains optical information.